

FRANCISCO IGNACIO ETEROVICH BARRA

MECHANICAL ENGINEER - MSc ROBOTICS ENGINEERING

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EDUCATIONAL BACKGROUND

Pontificia Universidad Católica de Chile (PUC) 🌐

BSc. Mechanical Engineering - Minor in Mechatronics

2016-2020

MSc. Engineering - Robotics (Sensors & Actuators - Hyperspectral Imaging)

2021 - 2023

PROFESSIONAL AND ACADEMIC BACKGROUND

LATAM Airlines - Powerplant Engineering 🌐

Senior Powerplant Engineer - Pratt&Whitney PW1100G Fleet

05/25 - Today

Engine operations & maintenance - Current position

Pontificia Universidad Católica de Chile 🌐

Adjunct Professor - Engineering Challenges

01/26 - Today

First year project based course - Technology / Innovation

Chilean National Aeronautics Company - ENAER 🌐

Project Engineer - Strategics Projects Division

01/24 - 01/25

1 year of experience in the mechanical design and development of the trainer aircraft Pillán II

Space Operations Squadron - Chilean Air Force 🌐

Internship

12/20 - 02/21

Operations and Satellite Control Terminal - FASat-Charlie

Teaching Assistant - Pontificia Universidad Católica de Chile 🌐

Served as a teaching assistant for courses including Engineering Challenges, Control Theory of Mechanical Systems, Energy Conversion, Thermofluids, Introduction to Mechanical Engineering, Introduction to Astronautics, General Physics Review, and Soccer I. My responsibilities included serving as a course assistant, lead assistant, and team coordinator, as well as preparing course materials, assessments, and conducting auxiliary classes throughout most of my university studies.

2017 - 2023

Monterey Bay Aquarium & Research Institute (MBARI) 🌐

Research Internship - Mechanical, Electrical and Software development

03/23 - 05/23

Conducted experiments for my Master's thesis on Underwater Hyperspectral Imaging

The Bridge Program 2020 - PUC / Texas A&M University 🌐

Research Internship Scholarship - Frontend development for VR Space Simulator (SpaceCRAFT)

02/20 - 03/20

Collaborated with Dr. Gregory Chamitoff (NASA Astronaut STS 124-126/134) at TAMU Aerospace.

HASSE x NASA Senior Space School 🌐

Houston Association for Space & Science Education

01/19 - 01/19

STEM experience at NASA & Aerospace companies at Houston, TX.

PERSONAL EXPERIENCES AND PROJECTS

Chilean Model Aircraft Club (CACH) 🌐

Member - Personal hobby

03/09 - Today

Design, build and fly radio-controlled (R/C) airplanes, helicopters and drones.

Currently serving as National Director of IMAC aerobatic competitions in Chile (2024-25)

Karate Do - Goju Ryu Ken Shin Kan 🌐

Black belt - 2nd Dan

2010 - Today

Chilean Space Association (ACHIDE) 🌐

Taking part in space sector activities, including FIDAE, community talks, livestreams and more

11/19 - Today

RobotX 2022 Maritime Robotics Challenge 🌐

Captain of Autonomous Drones Division, Caleuche UC - Winners of RobotX Air 2022

2021-2022

Students for Aerospace Development (EDAE) 🌐

Team Leader

2018-2020

Led a student group with the mission to design, build, and launch a rocket and nanosatellite.

ORGANIZATIONAL INVOLVEMENT

Engineering Student Council (CAi PUC)

- 'Kaizen' Team, CAi 2017

Collaborated with the CAi team to organize various events and activities for over 4,500 attendees throughout the year.

- Head of Enrollment, CAi 2017

Designed and managed enrollment activities in the CAi building in 2017.

- [ISEL 2017 - International Seminar for Engineering Leaders Organizer](#) 

Arranged for 65 international students to visit Chile; responsible for organizing all seminar activities and managing event spaces.

2017 - 2021

- Freshman Operations 2018 (Community Development Volunteering)

Led a team of first-year students in insulating homes in the Metropolitan Region.

- Spirit Week Leader "Saint Agustin week 2018" for the Class of 2016.

- [Undergraduate Academic Representative, Mechanical Engineering Department 2019](#) 

- [Winter Community Development 2019 \(TDI\) - Team Member](#) 

- Academic Coordination - Mechanical Engineering Student Chapter 2020

- [R/C Aeromodeling Workshop 2021 - Supported and funded by DAE UC & CAi](#) 

PUC Engineering Tutor Corps

Tutor of 8 freshmen students

Provided guidance and support to help first-year students from diverse admissions backgrounds adapt to university life throughout the academic year.

2018 & 2019

PUC Engineering Ambassadors

Lead Ambassador and Representative for UC Engineering

Represented the engineering program at schools and fairs, providing information on the curriculum, career prospects, and program benefits.

2018

INDIVIDUAL HONORS & AWARDS

- "Best Classmate" Award, Mechanical Engineering Class

2023

Selected by all graduating students in the Department of Mechanical Engineering, PUC

- Best Undergraduate Research Award, "Sounding Rocket & CanSat for Engineering Students"

2018

Presented at the III PUC-USM Engineering Student Congress, CORFO 2030 Project.

- Class Leadership Award, PUC Engineering

2017

Nominated, voted, and elected by students of the Class of 2016

- Class Motivation Award, PUC Engineering

2018 & 2020

Nominated, voted, and elected by students of the Class of 2016

- Tutor of the Month, PUC Engineering Tutors

06/18

Recognized for outstanding support as a tutor for first-year students.

'Egidio Viganó' Academic Merit Award, High School 'El Patrocinio de San José'

2006, 2007, 2008,

Awarded for achieving the highest grades in the class for the middle / high school year

2009, 2011 & 2014

LANGUAGES

- Spanish (native)

- English (C1 - TOEFL iBT score 104/120) 

- Russian (A1 - without certification)

SOFTWARE PROFICIENCY

- Microsoft Office (Word / PowerPoint / Excel / PowerBI)

- Adobe Suite (Photoshop / Illustrator)

- CAD Software (Fusion 360 / Inventor / CATIAv5 / ANSYS)

- Programming (Python / C++ / bash / OpenFOAM / Linux / Arduino / ROS2 / ArduPilot / Verilog / SQL)

- Others (LaTeX / Camstasia Studio / XLFR5 / Digital DATCOM)

TALKS AND PRESENTATIONS

- NASA Jet Propulsion Laboratory - Unlocking the Potential of Underwater Hyperspectral Imaging 

- Monterey Bay Aquarium Research Institute - Unlocking the Potential of Underwater Hyperspectral Imaging 

- SpaceX launches in different contexts - Commenting to Chilean community 